

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An image sensing module capable of fast transferring signal comprising:

an optical sensor set having a plurality of optical sensors, said optical sensors being used for receiving an optical signal and generating a plurality of corresponding charge signals;

a plurality of readout circuits each having a plurality of input terminals connected to a portion of said optical sensors and an output terminal, said output terminals of said readout circuits outputting in order said charge signals received by said input terminals; and

~~a plurality of amplifying circuits each having an input terminal and an output terminal, each of said input terminals of said amplifying circuits being independently connected to one of said output terminals of said readout circuits;~~ each of said amplifying circuits comprising:

an operation amplifier having a grounded first input terminal, a second input terminal and an output terminal;

a first switch having a first terminal and a second terminal, said first terminal being connected to said output terminal of one of said readout circuits;

a second switch having a first terminal connected to said second terminal of said first switch and a grounded second terminal;

a third switch having a first terminal connected to said second input terminal of said operation amplifier and a second terminal connected to said output terminal of said operation amplifier;

a fourth switch having a first terminal connected to said output terminal of said operation amplifier and a second terminal;

a first capacitor having a first terminal connected to said second terminal of said first switch and a second terminal connected to said second input terminal of said operation amplifier; and

a second capacitor having a first terminal connected to said second input terminal of said operation amplifier and a second terminal connected to said output terminal of said operation amplifier;

whereby said input terminals of said amplifying circuits receive and amplify said charge signals outputted in order by said output terminals of said readout circuits, and said output terminals of said amplifying circuits then output said amplified charge signals one by one.

2. (Original) The image sensing module capable of fast transferring signal as claimed in claim 1, wherein said optical sensor is one of the photodiode and phototransistor.

3. (Original) The image sensing module capable of fast transferring signal as claimed in claim 1, wherein said input terminals of said readout circuits are connected to said optical sensors in a discontinuous way.

4. (Original) The image sensing module capable of fast transferring signal as claimed in claim 1, wherein each said readout circuit comprising:

a switch array having a plurality of switches correspondingly connected to said optical sensors; and

a shift array having a plurality of shift registers correspondingly connected to said switches;

whereby said shift array turns on in order said switches connected to said shift registers to output in order said charge signals of said optical sensors connected to said switches.

5. (Cancelled).

6. (Currently Amended) The image sensing module capable of fast transferring signal as claimed in claim 15, wherein said second terminals of said fourth switches of said amplifying circuits are connected together.

7. (Currently Amended) The image sensing module capable of fast transferring signal as claimed in claim 15, wherein the capacitance of said first capacitor is larger than that of said second capacitor of each said amplifying circuit.

8. (Currently Amended) The image sensing module capable of fast transferring signal as claimed in claim 15, wherein said first switch and said third switch of each said amplifying circuit have the same switching frequency and are synchronous.

9. (Currently Amended) The image sensing module capable of fast transferring signal as claimed in claim 15, wherein said second switch and said fourth switch of each said amplifying circuit have the same switching frequency and are synchronous.

10. (Original) The image sensing module capable of fast transferring signal as claimed in claim 9, wherein said second switches of said amplifying circuits have the same switching frequency but are not synchronous.

11. (Original) The image sensing module capable of fast transferring signal as claimed in claim 9, wherein when said readout circuits output a charge signal, said second switches of said amplifying circuits will be on in order.

12-16. (Cancelled).